

ABSTRACT

A system (1) for damping thermo-acoustic instability in a combustor device (2) for a gas turbine, the combustor device including at least one combustion chamber (4), in particular of an annular type, and at least one burner (7) associated to said combustion chamber and mounted in a position corresponding to a front portion (8) set upstream of the combustion chamber; the damping system including at least one Helmholtz resonator (12) including a casing (13) defining inside it a pre-set volume and a neck for hydraulic connection between said pre-set volume and said combustion chamber, said neck being connected to one side of said combustion chamber at a distance from said front upstream portion thereof provided with said at least one burner. The casing of the resonator includes means for varying the aforesaid pre-set volume within a pre-set range and means for delivery of a cooling fluid.